

A Client-centered Counseling Approach for Motivating Older Adults Toward Physical Activity

By: Marie L Dacey, EdEt; [Appaneal, Renee Newcomer, EdD](#)

Dacey, M., & Newcomer, R. (2005). A client-centered counseling approach to motivating older adults towards physical activity. *Topics in Geriatric Rehabilitation*. 21(3), 195-204.

Made available courtesy of Lippincott, Williams, & Wilkins: <http://www.lww.com/>

*** Note: Figures may be missing from this format of the document

*** Note: This is not the final published version

Abstract:

Despite widespread information regarding the benefit of physical activity for health maintenance and restoration among older adults, many remain sedentary or even disengage from physical activity as they get older. This article presents literature regarding older adults, motivation toward physical activity and introduces self-determination theory as a developmentally appropriate framework for enhancing older adults, motivation toward physical activity by addressing needs for autonomy, competence, and relatedness. A case study illustrates how a typical patient-provider exchange using this approach might transpire.

Key words: aged, counseling, exercise, health, motivation, motor activity, psychogeriatrics

Article:

Physical activity is one of the major factors attributed to successful aging,¹⁻⁴ and promoting physical activity among older adults is a national health priority.⁵ However, population surveys indicate that only 25% to 35% of older adults meet the recommended level of activity and nearly one third are inactive.^{6,7} As the percentage of older adults rises, it will become increasingly more important for healthcare professionals to have population-specific knowledge regarding strategies to promote active lifestyles among older adults. This article (1) reviews age-related physical and developmental factors that have implications for older adults' motivation toward physical activity, (2) introduces self-determination theory as a rationale for a client-centered counseling approach to enhancing motivation, and (3) provides a model for an intervention with older adults to help them become more physically active.

PHYSICAL AND DEVELOPMENTAL FACTORS

Older adults encounter significant changes in physical functioning responsible for increased morbidity, which in turn, may preclude the adoption or continuation of physical activity. Physical changes include decreased lung capacity, flexibility, and acuity of the senses, as well as a general slowing of movement and loss of muscle mass.⁸⁻¹² These changes can result in strength and balance decrements, increasing the risk for falls among older adults. Moreover, changes in calcium metabolism and subsequent decreased bone density among older adults also increases risk for fractures and breaks as a result of falls. Older adults frequently report illness and disability as significant barriers to physical activity.^{13,14}

Quality of sleep is also affected during late adulthood, with nearly half of older adults reporting some degree of insomnia.¹⁵ Sleep impairment among the elderly has been associated with mood disturbance and poor health.¹⁶⁻²¹ Disruption in sleep, particularly deep sleep, limits the body's restorative processes and is associated with increased levels of stress hormones.^{22,23} Research also demonstrates impairment in immune system functioning among older adults,²⁴⁻²⁶ where hormones stimulated by stress (ie, cortisol) remain elevated longer. Prolonged elevation of stress hormones result in immunosuppression, making one susceptible to infection as well as diseases, such as cardiovascular disease, diabetes, and cancer.

Coping with a loss of physical functioning and increased disease susceptibility is challenging in itself, but older adults also encounter psychosocial losses (eg, retirement, death of loved ones, financial insecurity). The

combination of physical and psychosocial losses experienced during this life-stage is especially challenging, and a successful transition into late adulthood is essential for health and well-being.

PSYCHOSOCIAL DEVELOPMENT IN OLDER ADULTS

A well-known developmental model, developed by psychologist Erik Erikson,²⁷⁻²⁹ identifies primary challenges or "crises" encountered during the course of one's life, beginning in infancy through late adulthood. A successful resolution of each life-stage crisis results in feelings of competency, strengthened ego and positive growth toward future life-stages, whereas an inability to cope results in internal conflict and feelings of inadequacy. During late adulthood, the life-stage crisis is characterized as Integrity vs Despair, where reflection on one's life may either result in satisfaction (Integrity) or disappointment (Despair). In older adults, self-reflection is directed at extracting the meaning and connection of one's life course, and it is an important determinant of quality of life and well-being.^{30,31} Moreover, older adults' satisfaction with life plays a key role in their behavioral motivation,³²⁻³⁴ and this may be particularly important in regards to physical activity motivation.

OLDER ADULTS' MOTIVATION TOWARD PHYSICAL ACTIVITY

Investigations of physical activity participation motivation have primarily targeted children through young adults. Consequently, there is a dearth of knowledge regarding motivation toward physical activity in the older adult population.³⁵⁻³⁷ Studies have also relied primarily on large cohort surveys or qualitative interviews that assess self-reported reasons to engage or not engage in physical activity behaviors. Despite these limitations, findings have contributed to a general understanding of older adult physical activity participation motivation. Exercising to maintain good physical health, while overall an important determinant, may actually decline with age.^{38,39} In one project consisting of interviews with 55- to 75-year-olds, participants were generally aware that exercise was healthy for them; however, they rarely reported a desire to maintain or improve health as a motivating factor, and few were interested in the details of health benefits.³⁹ Related goals that have been reported to influence exercise participation motivation in older adults include a desire to maintain independence,³⁸ feel mentally alert,⁴⁰ and reap the benefits of social contact.^{39,41}

Other studies report that older adults look to physical activity to help them globally feel good or better, and this often includes both psychological and physical well-being.⁴² Positive affect while exercising, especially the feeling of enjoyment, is associated with physical activity motivation and behavior.⁴³ The social contacts and enjoyment one has with friends while exercising are also cited as motivators.^{42,44,45}

Older adults are also motivated to exercise because they perceive exercise as having the benefit of helping them cope with life transitions and challenges, and of giving them the functional ability to perform daily tasks.^{39,46} There is positive regard and higher motivation when older adults perceive physical activity as a useful way to maintain personal control and successfully engage in activities of daily living. Practical considerations are central, as older adults' interests in exercise behavior are influenced by lifestyle routines, critical life events, as well as the convenience and utility of the physical activity.

While research on older adult physical activity motivation provides insight into how older adults may differ from younger adults, it should be remembered that motivational determinants may change not only across the lifespan, but also across different stages of readiness toward exercise. A stage of change model posits that people range in their readiness to change a behavior along a continuum from inaction (ie, precontemplation, contemplation) to action (ie, preparation, action, and maintenance).⁴⁷⁻⁵² The motives of an individual who is considering incorporating physical activity into his or her life but currently is sedentary (contemplation stage) are likely to vary once that individual becomes regularly active (action stage). This model has been well-validated in older adults with respect to health behaviors such as physical activity and nutrition.^{47,53-63} Although many older adults are inactive, there are also those who have maintained physical activity as part of their lifestyle for many years, and research has examined the unique characteristics of older adult regular exercisers.^{39,42,64,65} These characteristics provide insight into additional motivational determinants that may evolve as one becomes a long-term maintainer of regular physical activity. Many of the participants in these

studies stressed the importance of maintaining an identity as a physically active person through-out life:^{42,64,65} This self-identity as a positive, exercising person has been labeled "Vision,"⁶⁶ and viewing oneself as an exerciser is a strong motivator for exercise participation. This identity is often formed during earlier life experiences with exercise and/or sport, and it is a strong determinant for participation in physical activity during late adulthood. Evidence suggests it can also be developed when individuals begin to exercise in later life.⁶⁸

Whether developed during childhood or late adulthood, self-identity as an exerciser war-rants consideration when addressing older adults' motivation toward physical activity.

As discussed above, most investigations that assess motivation toward exercise rely on self-reported reasons related to adoption, maintenance, and/or no engagement in regular physical activity. While these "surface" motives provide information about people's thoughts and feelings related to exercise, it has been argued that they do not contribute to understanding physical activity behavior in more theoretical terms.³⁵ However, one comprehensive model of motivation and personality, self-determination theory (SDT),⁶⁹ has informed research related to the adoption and maintenance of several health behaviors, including physical activity. This theoretical framework is especially applicable to developing counseling interventions to increase older adults' motivations toward physical activity.

SELF-DETERMINATION THEORY

Self-determination theory (SDI) is an organismic meta-theory, which assumes that people are active rather than passive organ-isms, have innate tendencies toward psycho-logical growth and development, strive to master ongoing challenges, and desire to integrate their experiences into a coherent sense of self.⁷⁰ This theory states that there are three basic psychological needs—autonomy, competence, and relatedness—which are innate and universal. The fulfillment of these needs occurs primarily through positive interactions with the social environment and, similar to Erikson's psychosocial life-stage crises, it is essential for psychological health and well-being.

According to SDT, individuals will gravitate toward situations and activities that satisfy these needs, and when people are in situations that foster fulfillment of these basic needs, they tend to be intrinsically motivated in their behavior. Intrinsic motivation refers to motivation that stems from the inherent satisfaction one derives from a particular behavior, and it is accompanied by feelings of self-control and self-choice, a tendency to welcome challenges, a sense of purposeful connection to what one is doing, and the capacity to positively relate to others one's personal choices. People with intrinsic motivation find the experience itself rewarding. Extrinsic motivation, in contrast, entails being motivated by some external benefit or outcome. As there are several levels of extrinsic motivation occurring along a continuum toward intrinsic motivation, the further one is in the direction of intrinsic motivation, the more the individual demonstrates behavior that is internalized into the self. Thus, at each level there is increased probability that he or she is self-determined, task-oriented, energized, confident, satisfied, and persistent in the particular activity.

SELF-DETERMINATION THEORY AND OLDER ADULTS

According to self-determination theory (SDI), fulfillment of the basic psychological needs for autonomy, competence, and relatedness is important throughout the life span.⁷¹⁻⁷³ Meeting these needs remains crucial into later life, as it underscores older adults' discoveries of new interests and their maintenance of vitality after they have completed usual family and career responsibilities." Yet, as previously described, older adults are faced with the challenges of physical and psychosocial stressors, and aging often involves perceptions of diminishing competence, or feelings of reduced autonomy.⁷⁵⁻⁷⁸ Changing roles, escalating health concerns, and diminishing capabilities could threaten self-determination. Thus, the SDT is especially applicable to understanding older adults' motivations and behaviors, and as a theoretical foundation for interventions that attempt to help motivate toward health behaviors such as physical activity participation.

When older adults experience physical activity in a way that meets their needs for autonomy and personal control, they are more likely to be intrinsically oriented toward being physically active. The notion that personal

control is important to exercise motivation is supported by Jette,⁷⁹ who found that older adults with a greater sense of control toward exercise were more likely to adhere to a home-based resistance training exercise program. Older adults' reasons to exercise can be viewed as reflecting both intrinsic and extrinsic motivation; however, intrinsic enjoyment in general⁴⁶ or enjoyment of socialization that comes from exercising in a group³⁹ appears more prominent than extrinsic health benefits. Older adults who exercise regularly also claimed to be more motivated by personal achievements and changes over time, rather than by working toward external criteria. These findings corroborate previous evidence from younger subjects that regularly maintained exercise is associated with intrinsic and self-determined extrinsic forms of motivation.³⁶ Thus, while health concerns and potential health benefits may dominate earlier stages of change in older adults, there are findings to suggest that, as with younger samples, intrinsic motives such as enjoyment and mastery may be primary to maintenance.

ENVIRONMENTAL DETERMINANTS OF HEALTH BEHAVIOR MOTIVATION

In recent years, increased attention has been given to physical and social environmental determinants of health behavior.⁸⁰⁻⁸⁴ Literature emphasizes the importance of recognizing the interaction between individual factors (active, self-integrating nature of human beings) and social environments that either nurture or hinder individual factors.^{69,70} An extension of SDT, Cognitive Evaluation Theory (CET),⁶⁹ addresses the external factors that contribute to shape and influence people's motivation and subsequent behavior. Initially, CET was used to examine the use and value of external tangible rewards and verbal feedback to influence intrinsic motivation. Findings demonstrated that indeed external control using rewards and contingencies tends to undermine intrinsic motivation, which occurs because perceived locus of control for behavior lies beyond the individual. As a result, the behavior does not serve one's basic needs for autonomy, competence, and relatedness.

In contrast, when environmental inputs and structures support people's basic needs, individuals are more likely to demonstrate increased intrinsic motivation toward a behavior.⁸⁵⁻⁸⁹ In such circumstances, behavior is initiated by and congruent with the self, allowing for a perceived internal locus of control. When faced with an onslaught of age-related physical changes, older adults are likely to experience a diminished sense of control over their health. Research demonstrates the importance of perceived personal control in both physical and psychological health.⁹⁰ A lack of perceived control has been associated with diminished health in older adults,^{91,92} and interventions to enhance control have demonstrated positive effects on self-reported well-being among nondepressed older adults.^{93,94}

Studies in nursing homes have found that autonomy-supportive environments that pro-mote residents, personal responsibility and control over daily life choices enhances their perceived internal locus of control and feelings of overall well-being.^{72,95,96} These studies demonstrated in several domains that perceived personal control is associated with lower depression and higher self-esteem, subjective vitality, life satisfaction, general health, and psychological adjustment. Furthermore, Bocksnik and Hall" suggest that older adults are generally adept at identifying what is important and personally meaningful to them, and that it is important for them to be recognized for this, and to be able to exert as much personal control over their lives as possible. Similarly, competence is a lifelong need; however, as stated above, aging is commonly accompanied by threats to meeting this need. However, older adults can still be highly competent when they engage in challenging activities that foster feelings of effectiveness. Environmental supports, then, need to offer opportunities for behaviors that are well-matched with skill level, provide challenge without frustration, and promote self-selection.⁷⁴ Finally, supporting older adults' needs for relatedness involves providing genuine social contact characterized by emotion, expression, and depth, as more superficial connections yield less benefit to the older adult.^{31,97}

Two recent intervention projects have examined the effect of interventions that support autonomy and personal choice on physical activity behavior in middle-aged and older adults, the Community Healthy Activities Model Program for Seniors (CHAMPS)⁸⁷ and the Community Health Advice by Telephone (CHAT).⁸⁶ The CHAMPS was a 1-year randomized controlled trial to increase physical activity in older adults (M age = 74). The program provided (1) choice-based interventions that guided underactive seniors to choose activities that took into account their health, preferences, and abilities, (2) stage-tailored information based on transtheoretical model constructs,⁹⁸ and (3) material related to exercise safety, overcoming motivational barriers, and developing a

balanced exercise regimen. Compared with those in the control group, participants who received the intervention demonstrated significant increases in physical activity. Instead of using an in-person approach, the CHAT project compares the effects of 2 modes of telephone-administered physical activity counseling with sedentary adults older than 55 years. One mode, delivered by a person, theoretically could increase extrinsic motivation, and also have a negative impact on long-term adherence, since the external social influence may ultimately undermine intrinsic motivation. The comparative mode is a telephone-administered counseling program delivered by a computer. Previous research has suggested that this form of counseling may be less socially threatening than that created by personal contact with counselors, and that people are more likely to actively seek out feedback from a computer source than from a human, thus increasing personal control and intrinsic motivation. In sum, the CHAMPS and CHAT research projects, which favor interventions utilizing constructs from self-determination theory, are contributing to our understanding of physical activity in older adults.

CLIENT-CENTERED APPROACH TO PHYSICAL ACTIVITY COUNSELING

We suggest that rehabilitation practitioners who strive to facilitate physical activity participation in older adults develop a client-centered counseling approach that recognizes older adults, lifespan development and needs of self-determination to enhance intrinsic motivation. Autonomy needs are supported by providing opportunities to clients to sustain an internal locus of control through personal identification of issues, choice, and resolution. Competence needs may be met by providing complete and accurate information to clients, and helping them effectively attain self-stated desired outcomes. Finally, relatedness needs are addressed by treating clients in a nonjudgmental manner characterized by respect, empathy, and sincerity. A client-centered counseling approach is especially applicable to older adults in rehabilitation whose quality of lives would benefit from health behavior changes.

The client-centered counseling method parallels strategies based in motivational interviewing⁹⁹ that have been successfully applied to disease self-management, health behaviors, and psychosocial concerns with patients in clinical settings.^{100,101} Briefly, motivational interviewing is a style of consultation practitioners employ with patients/ clients that helps individuals verbalize personal life goals and concerns, and develop their own logic as to how current and proposed health behaviors fit with what is meaningful to them. When individuals generate reasons to adopt health behaviors that are congruent with their personal values and needs, self-determined forms of extrinsic and intrinsic motivation toward the behavior are likely to occur. Thus, these clients are more apt to adopt and maintain the health behaviors.

The essentials of a client-centered approach based on motivational interviewing in physical activity counseling include establishing rapport with the client, mutually setting an agenda for discussion, understanding and exploring how ready the client is to change his or her behavior, discussing how important being physically active is to the client, and helping to build feelings of confidence that change is possible if this is an issue. Throughout the consultation(s), it is important that the practitioner respect the client's freedom of choice, by carefully listening to the client, seeking to understand, and encouraging the client to make his or her own decisions.

While practitioners can give "advice" as part of the counseling intervention, this should be provided in a nonjudgmental manner, and only when the client has stated a willingness to hear it. The practitioner also avoids giving exercise prescriptions unless a client is ready for action and requests this information. While this approach is especially warranted with older adults who are currently inactive or underactive (ie, precontemplation through preparation stages of change)," we also recommend that practitioners employ it with physically active individuals to explore concerns as they arise.

THE CASE OF MR SMITH

It has been our experience that rehabilitation providers often desire specific and realistic examples of how to integrate new counseling strategies into a practice setting. Therefore, we have provided a hypothetical case to illustrate a typical patient-provider dialogue as well as an explanation (in parentheses) that connects provider

responses to patient needs. This case study is provided to facilitate practitioners, adoption of a client-centered approach to physical activity counseling with older adults.

Mr. Smith is a married, 74-year-old retired engineer who was diagnosed with coronary artery disease 10 years ago. He had angioplasty performed 6 months ago, coronary artery bypass surgery 3 weeks ago, and is just beginning cardiac rehabilitation. Mr. Smith had been active in youth and college sports, most notably football, but he has been sedentary since his mid-forties. He has steadily gained weight throughout his adult life, and is currently obese (BMI = 34). His cardiologist recommended that he start some moderate daily physical activity, and he is now meeting with a physical therapist, Mr. Fit, to discuss implementation of his cardiologist's recommendation.

Mr. Fit: Hi, I'm Mr. Fit and will be working with you over the next few months. I understand that you had bypass surgery 3 weeks ago, and that your physician has recommended moderate daily physical activity. Is that right? (Verifying the accuracy of one's understanding allows the client to retain control of the agenda)

Mr. Smith: Yes, I guess so. He says exercise, and change what I eat, and stay calm. He's asking a lot, I'd say.

Mr. Fit: Sounds like it maybe feels a bit overwhelming to you. (Provider is accepting, and uses reflective listening.)

Mr. Smith: It is. I'm no spring chicken—been doing what I do for many years. And I like it. I mean I like a good steak, and meeting my buddies for breakfast most mornings. And I'm just not one of those guys who's gonna go off and play golf, or meet the ladies for a mall walk. I'd rather take a nap. I don't smoke, hardly drink. I'm not hurting anyone. My father died of a heart attack when he was younger than me. I think it's just in the genes and there's nothing I can do about it. Of course, now they have these fancy operations—guess that's why I'm still here.

Mr. Fit: (Mr. Fit has now assessed that Mr. Smith is in the precontemplation stage for physical activity stage, and he has learned that Mr. Smith's perceived importance of physical activity is low.) So, you are basically happy the way you live your life now, and you do not necessarily think that the things your doctor asked you to do will make any difference in the quality of your life. Am I right? (again, reflective listening)

Mr. Smith: Yes.

Mr. Fit: It must be hard to have just had heart surgery, and now be told to change your lifestyle. (expressing empathy and understanding meets Mr. Smith's need for relatedness)

Mr. Smith: Yes, damn hard.

Mr. Fit: Well, as you know I'm a physical therapist. Is it OK with you if we talk about how you feel about your doctor's recommendation about physical activity? (Mr. Fit decides to attempt to explore Mr. Smith's feelings in the specific area of physical activity, but will first verify this agenda is agreeable to Mr. Smith, thus supporting autonomy)

Mr. Smith: Sure—I'll tell you how I feel. I feel, like I said, it won't make any difference whether I'm out there walking or not. Besides, it's just too much of a hassle. (Mr. Fit has successfully introduced physical activity. Mr. Smith, himself, has introduced "walking" as a form of physical activity, but he has expressed again that he places a low importance on walking. He clearly does not believe it will positively affect his health, and he perceives barriers to doing it, in that it would not be effective.)

Mr. Fit: What would make walking less of a hassle? (Mr. Fit stays with "walking" and decides to explore feelings that threaten Mr. Smith's need for competence. Most notably, by asking a question that prompts Mr.

Smith to consider factors that would enhance feelings of effectiveness, rather than explain what the "hassles" are, Mr. Fit is gently guiding him to think positively, rather than negatively, about walking.)

Mr. Smith: Well, if I could just go out the door and walk down to the diner to meet my buddies on my own, without having to explain my every move to my wife. It's about 5 blocks. I thought about walking it, but my wife—she's so worried since the surgery, and never wants me out of her sight. (Clearly, Mr. Smith would consider walking if there is a destination or purpose involved rather than just walking per se. This is important because it could represent an expression of personal control and choice. At this point, Mr. Fit recognizes that Mr. Smith may not actually be a firm precontemplator but instead may be willing to contemplate walking as it has a benefit in addition to barriers. Mr. Fit also recognizes that social support in this case may involve less rather than more of his wife's involvement)

Mr. Fit: It sounds to me that if your wife understood there was little risk in you walking alone to the diner, it might feel good to you to be able to get out on your own. Is that correct? (Mr. Fit has reframed walking as something that could be positively regarded, not because of health benefits, but because it could feel good not to have his wife ever-present and worrying. Mr. Fit continues to verify the accuracy of his interpretation, which is an important ongoing strategy.)

Mr. Smith: Yes. I just feel like such a patient around her. She has to do everything for me—always re-minding me to take my pills, telling me to rest, asking if I need or want anything, and constantly asking, "You feeling OK, Jim?" I'm not a man anymore, I'm her child. (Mr. Smith has expressed important feelings of vulnerability and frustration, which Mr. Fit knows are fairly common in older adults whose health has deteriorated. Mr. Fit must decide whether or not to encourage discussion about these feelings. He decides to acknowledge the feelings with Mr. Smith, but not focus on them. How, even with Mr. Smith's permission, he will speak with the health psychologist who is on the cardiac rehabilitation team.)

Mr. Fit: You seem to be experiencing some understandable frustration about how your wife is both lovingly concerned about you and treating you like you cannot do anything for yourself. Can I offer a suggestion that might help to improve your situation? (Mr. Fit reframes Mr. Smith's concerns about his wife's intrusiveness and asks his permission to provide him with additional information.)

Mr. Smith: Sure, whatever.

Mr. Fit: Well, it sounds like you may be willing to consider walking to meet your friends, and actually that is a good way to get the exercise that your doctor would like you to do (providing accurate, simple information). We can work together to strengthen your physical ability and confidence in walking safely to the diner. As far as the frustration you are experiencing with your wife, that's a very normal thing. (Through normalizing his experience, Mr. Fit communicates an understanding of the situation. In addition to meeting Mr. Smith's needs for relatedness, this may also relieve some of the threats to competency.) After a surgery like you had, it is common for the spouse to feel pretty frustrated and helpless. Unfortunately, this is often expressed by taking on more responsibility for you such as reminding you to take your pills, constantly checking in to see how you feel and so on. Although her intentions are good, she may not realize that her concerns get in the way of your walking and just feeling better about yourself in general. By meeting with our health psychologist, Dr. Al, you and your wife could find a way to work something out that you both can feel good about. Is this something you would consider doing? (Working with the psychologist is introduced as a way to enhance rather than threaten competency. Also, a potential outcome of their work with the psychologist would enhance communication within the couple's relationship, which in turn, would meet their needs for relatedness.)

Mr. Smith: Guess it can't hurt, and my wife will do anything you guys suggest.

Mr. Fit: Then, with your permission, I would like to tell Dr. Al what we talked about today, and that I suggested to you that you and your wife see him. I'll leave it up to you to follow-up on making that appointment. Is that

ok? (Again, Mr. Smith is provided with a suggestion but retains control over making the decision and contacting the psychologist)

Mr. Smith: Alright.

(Mr. Smith may or may not make the initial appointment, but Mr. Fit has already been granted permission to speak with the psychologist about this case. He can follow up with Mr. Smith either by phone or at his next appointment and might consider making an introduction if necessary)

In this case study, the physical therapist, Mr. Fit used multiple strategies to engage the patient, to establish a plausible and effective start to treatment. In this scenario, Mr. Fit validated his patient's feelings by normalizing them as emotions that often accompany life-altering events. While assessing Mr. Smith's readiness to exercise, the physical therapist made sure to continually reinforce the positive aspects of engaging in a walking program while making sure Mr. Smith's sense of autonomy and competence remained intact. In addition, it was important for the patient to be made aware of the fact that his physical therapist was not only listening to, but also hearing, his concerns and reflecting back to him his feelings of frustration.

As a result of the counseling strategies employed by the physical therapist in this case scenario, Mr. Smith is more likely to explore the possibility of engaging in an exercise program that will serve to increase his function and improve his quality of life.

CONCLUSION

Several strategies are utilized during this counseling session, specifically assessing stage of readiness, patient involvement in setting the agenda, reflective listening, interpretive feedback, eliciting permission and reactions, as well as providing information without judgment. The milieu created by the practitioner is possibly more important than specific techniques utilized, where the client's developmental needs are met. Throughout the consultation, the practitioner supports basic needs of autonomy, competence, and relatedness, while reducing resistance to engaging in physical activity. With these basic goals in mind, the practitioner may allow the consultation to naturally and flexibly evolve. A client-centered approach facilitates patient empowerment, and providers are less likely to experience the frustration that typically results from a more goal-directed action-oriented consultation in which the provider views himself or herself as the expert who gives advice about physical activity.

REFERENCES

1. Seeman T, Chen X. Risk and protective factors for physical functioning in older adults with and without chronic conditions: MacArthur Studies of Successful Aging. *J Gerontol B Psychol Sci Soc Sci.* 2002;57:S135-S144.
2. Strawbridge WJ, Cohen RD, Shema SJ, Kaplan GA. Successful aging: predictors and associated activities. *Am J Epidemiol.* 1996;144:135-141.
3. Galloway MT, Jokl P. Aging successfully: the importance of physical activity in maintaining health and function. *J Am Acad Orthop Surg.* 2000;8:37-44.
4. Seeman TE, Berkman LF, Charpentier PA, Blazer DG, Albert MS, Tinetti ME. Behavioral and psychosocial predictors of physical performance: MacArthur studies of successful aging. *J Gerontol A Biol Sci Med Sci.* 1995;50:M177-M183.
5. US Dept of Health & Human Services. Promoting Active Lifestyles Among Older Adults. Atlanta: Centers for Disease Control and Prevention; 2002.
6. US Dept of Health & Human Services. Prevalence of no leisure-time physical activity-35 states and the District of Columbia, 1988-2002. *MMWR Morb Mortal Wkly Rep.* 2004;53:82-86.
7. Prevalence of physical activity, including lifestyle activities among adults-United States, 2000-2001. *MMWR Morb Mortal Wkly Rep.* 2003;52:785-788.
8. Kosnik WD, Sekuler R, Kline DW. Self-reported visual problems of older drivers. *Hum Factors.* 1990;32:597-608.

9. Kline DW, Kline TJ, Fozard JL, Kosnik W, Schieber F, Sekuler R. Vision, aging, and driving: the problems of older drivers. *J Gerontol* 1992;47:P27-P34.
10. Hortobagyi T, Zheng D, Weidner M, Lambert NJ, Westbrook S, Houmard JA. The influence of aging on muscle strength and muscle fiber characteristics with special reference to eccentric strength. *J Gerontol A Biol Sci Med Sci*. 1995;50:B399-B406.
11. Visser M, Kritchevsky SB, Goodpaster BH, et al. Leg muscle mass and composition in relation to lower extremity performance in men and women aged 70 to 79: the health, aging and body composition study. *J Am Geriatr Soc*. 2002;50:897-904.
12. Galea V Changes in motor unit estimates with aging. *J Clin Neurophysiol* 1996;13:253-260.
13. O'Neill K, Reid G. Perceived barriers to physical activity by older adults. *Can J Public Health*. 1991;82:392-396.
14. Booth ML, Bauman A, Owen N, Gore CJ. Physical activity preferences, preferred sources of assistance, and perceived barriers to increased activity among physically inactive Australians. *Prev Med*. 1997;26:131-137.
15. Baclunan DL. Sleep disorders with aging: evaluation and treatment. *Geriatrics*. 1992;47:53-56,59-61.
16. Morgan K. Daytime activity and risk factors for late-life insomnia. *J Sleep Res*. 2003;12:231-238.
17. Cricco M, Simonsick EM, Foley DJ. The impact of insomnia on cognitive functioning in older adults. *J Am Geriatr Soc*. 2001;49:1185-1189.
18. Roberts RE, Shema SJ, Kaplan GA. Prospective data on sleep complaints and associated risk factors in an older cohort. *Psychosom Med*. 1999;61:188-196.
19. Morgan K, Clarke D. Risk factors for late-life insomnia in a representative general practice sample. *Br J Gen Pract*. 1997;47:166-169.
20. Henderson S, Jorm AF, Scott LR, Mackinnon AJ, Christensen H, Korten AE. Insomnia in the elderly: its prevalence and correlates in the general population. *Med J Aust* 1995;162:22-24.
21. Morin CM, Gramling SE. Sleep patterns and aging: comparison of older adults with and without insomnia complaints. *Psychol Aging*. 1989;4:290-294.
22. Spiegel K, Leproult R, Van Canter E. Impact of sleep debt on metabolic and endocrine function. *Lancet* 1999;354:1435-1439.
23. Maschke C, Hecht K. Stress hormones and sleep disturbances-electrophysiological and hormonal aspects. *Noise Health*. 2004;6:49-54.
24. Saltzman RL, Peterson PK. Immunodeficiency of the elderly. *Rev Infect Dis*. 1987;9:1127-1139.
25. Heuser MD, Adler WH. Immunological aspects of aging and malnutrition: consequences and intervention with nutritional immunomodulators. *Clin Geriatr Med*. 1997;13:697-715.
26. Castle SC. Impact of age-related immune dysfunction on risk of infections. *Z Gerontol Geriatr* 2000;33:341-349.
27. Douvan E. Erik Erikson: critical times, critical theory. *Child Psychiatry Hum Dev*. 1997;28:15-21.
28. Eagle M. Contributions of Erik Erikson. *Psychoanal Rev*. 1997;84:337-347.
29. Steingart I. Erik Erikson's work: clinical implications and applications. *Psychoanal Rev*. 1997;84:349-362.
30. Hollis LA. Sex comparisons in life satisfaction and psychosocial adjustment scores with an older adult sample: examining the effect of sex role differences in older cohorts. *J Women Aging*. 1998;10:59-77.
31. Pinquart M, Sorensen S. Influences of socioeconomic status, social network, and competence on subjective well-being in later life: a meta-analysis. *Psychol Aging*. 2000;15:187-224.
32. Holahan CK, Chapman JR. Longitudinal predictors of proactive goals and activity participation at age 80. *J Gerontol B Psychol Sci Soc Sci*. 2002;57:P418- P425.
33. Jacob M, Guarnaccia V Motivational and behavioral correlates of life satisfaction in an elderly sample. *Psychol Rep*. 1997;80:811-818.
34. Jackson T, Weiss KE, Lundquist JJ, Soderlind A. Perceptions of goal-directed activities of optimists and pessimists: a personal projects analysis. *J Psychol* 2002;136:521-532.
35. Biddle S, Mutrie N. *Psychology of Physical Activity: Determinants, Well-Being and Interventions*. New York: Routledge; 2001.
36. Frederick CM. Self-determination theory and participation motivation research in the sport and exercise domain. In: Ryan RM, ed. *Handbook on Self-Determination Research*. Rochester, NY: University of Rochester Press; 2002.

37. Rikli RE. Reliability, validity, and methodological issues in assessing physical activity in older adults. *Res Q Exerc Sport*. 2000;71:S89-S96.
38. Health Education Authority, Sports Council. Allied Dunbar National Fitness Survey: Summary. Wetherby, UK: Sport England Publications; 1992.
39. Stead M, Wimbush E, Eadie D, Teer P. A qualitative study of older people's perceptions of ageing and exercise: the implications for health promotion. *Health Educ* 1997;56:3-16.
40. Campbell P, MacAuley D, McCrum E, Evans A. Age differences in the motivating factors for exercise. *J Sport Exerc Psychol* 2001;23:191-199.
41. O'Neill K, Reid G. Perceived barriers to physical activity in older adults. *Can J Public Health*. 1991;82:392-396.
42. Resnick B, Spellbring AM. Understanding what motivates older adults to exercise. *J Gerontol Nurs*. 2000;26:34-42.
43. Dacey M. Self-determination in motivation across physical activity levels in older adults. *Res Q Exerc Sport*. 2004;75(suppl 4):Axxiv-Axxv.
44. Riffle KL, Yoho J, Sams J. Health-promoting behaviors, perceived social support, and self-reported health of Appalachian elderly. *Public Health Nurs*. 1989;6:204-211.
45. Resnick B, Orwig D, Magaziner J, Wynne C. The effect of social support on exercise behavior in older adults. *Clin Nurs Res*. 2002;11:52-70.
46. Bocksnick J, Hall B. Physical activity decision-making in older adults. *Activities, Adaptation, and Aging*. 2001;25:1-19.
47. Laforge RG, Rossi JS, Prochaska JO, Velicer WF, Levesque DA, McHorney CA. Stage of regular exercise and health-related quality of life. *Prev Med*. 1999;28:349-360.
48. Norcross JC, Prochaska JO. Using the stages of change. *Harv Ment Health Lett*. 2002;18:5-7.
49. Prochaska JO, DiClemente CC. Stages of change in the modification of problem behaviors. *Prog Behav Modif* 1992;28:183-218.
50. Prochaska JO, Velicer WF, Rossi JS, et al. Stages of change and decisional balance for 12 problem behaviors. *Health Psychol*. 1994;13:39-46.
51. Greene GW, Rossi SR, Rossi JS, Velicer WF, Fava JL, Prochaska JO. Dietary applications of the stages of change model. *J Am Diet Assoc*. 1999;99:673-678.
52. Sarkin JA, Johnson SS, Prochaska JO, Prochaska JM. Applying the transtheoretical model to regular moderate exercise in an overweight population: validation of a stages of change measure. *Prev Med*. 2001;33:462-469.
53. Lach HW, Everard KM, Highstein G, Brownson CA. Application of the transtheoretical model to health education for older adults. *Health Promot Pract*. 2004;5:88-93.
54. Schumann A, Estabrooks PA, Nigg CR, Hill J. Validation of the stages of change with mild, moderate, and strenuous physical activity behavior, intentions, and self-efficacy. *Int J Sports Med*. 2003;24:363-365.
55. Tucker M, Reicks M. Exercise as a gateway behavior for healthful eating among older adults: an exploratory study. *J Nutr Educ Behav*. 2002;34:S14-S19.
56. Schumann A, Nigg CR, Rossi JS, et al. Construct validity of the stages of change of exercise adoption for different intensities of physical activity in four samples of differing age groups. *Am J Health Promot* 2002;16:280-287.
57. Nied RJ, Frandlin B. Promoting and prescribing exercise for the elderly. *Am Fam Physician*. 2002;65:419-426.
58. Litt MD, Kleppinger A, Judge JO. Initiation and maintenance of exercise behavior in older women: predictors from the social learning model. *J Behav Med*. 2002;25:83-97.
59. Burbank PM, Padula CA, Nigg CR. Changing health behaviors of older adults. *J Gerontol Nurs*. 2000;26:26-33; quiz 52-23.
60. Nigg CR, Burbank PM, Padula C, et al. Stages of change across ten health risk behaviors for older adults. *Gerontologist* 1999;39:473-482.
61. Conn VS. Older adults and exercise: path analysis of self-efficacy related constructs. *Nurs Res*. 1998;47:180-189.

62. MacLean TB. Influence of psychosocial development and life events on the health practices of adults. *Issues Ment Health Nurs*. 1992;13:403-414.
63. Marcus BH, Banspach SW, Lefebvre RC, Rossi JS, Carleton RA, Abrams DB. Using the stages of change model to increase the adoption of physical activity among community participants. *Am J Health Pro-mot* 1992;6:424-429.
64. Kluge MA. Understanding the essence of a physically active lifestyle: a phenomenological study of women 65 and older. *J Aging Phys Activ*. 2002;10: 4-27.
65. O'Brien Cousins S, Vertinsky PA. Recapturing the physical activity experiences of the old: a study of three women. *J Aging and Phys Activ*. 1995;3:146- 162.
66. Kimiecik J. *The Intrinsic Exerciser*. Boston: Houghton Mifflin; 2002.
67. Ebrahim S, Rowland L. Towards a new strategy for health promotion for older women: determinants of physical activity. *Psychol, Health Med*. 1996;1:29- 40.
68. Dacey M, Baltzell A, Zaichkowsky L. Factors in women's maintenance of vigorous or moderate physical activity. *Women Sport Phys Activ J*. 2003; 12:87-111.
69. Deci EL, Ryan RM. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum; 1985.
70. Deci EL, Ryan RM. The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychol Inquiry* 2000;11:227-268.
71. Ryan RM. Psychological needs and the facilitation of integrative processes. *J Pers*. 1995;63:397-427.
72. Vallerand RJ, O'Connor BP. Motivation in the elderly: a theoretical framework and some promising Findings. *Can Psychol* 1989;30:538-550.
73. Vallerand RJ, O'Connor BP, Hamel M. Motivation in later life: theory and assessment. *Int J Aging Hum Dev*. 1995;41:221-238.
74. Ryan RM, La Guardia JG. What is being optimized? Self-determination theory and basic psychological needs. In: Abeles N, ed. *Psychology and the Aging Revolution*. Washington, DC: American Psychological Association; 2000:145-172.
75. Ory M, Kinney Hoffman M, Hawkins M, Sanner B, Mockenhaupt R. Challenging aging stereotypes: strategies for creating a more active society. *Am J Prey Med*. 2003;25:164-171.
76. Retsinas J. Geriatric myths reconsidered. *Am Fam Physician*. 1986;33:187-191.
77. Dychtwald K, Zitter M. Looking beyond the myths of aging America. *Healthc Financ Manage*. 1988;42:62,64,66.
78. Rowe JW, Kahn RL. *Successful Aging*. New York: Dell Publishing Inc; 1998.
79. Jette AM, Rooks D, Lachman M, et al. Home-based resistance training: predictors of participation and adherence. *Gerontologist* 1998;38:412-421.
80. Wilcox S, Bopp M, Oberrecht L, Kammermann SK, McElmurray CT Psychosocial and perceived environmental correlates of physical activity in rural and older African American and white women. *J Gerontol B Psychol Sci Soc Sci*. 2003;58:P329-P337.
81. Sanderson B, Littleton M, Pulley L. Environmental, policy, and cultural factors related to physical activity among rural, African American women. *Women Health*. 2002;36:75-90.
82. Miler AM, Iris M. Health promotion attitudes and strategies in older adults. *Health Educ Behav*. 2002;29:249-267.
83. Brownson RC, Baker EA, Housemann RA, Brennan LK, Bacak SJ. Environmental and policy determinants of physical activity in the United States. *Am J Public Health*. 2001;91:1995-2003.
84. Epstein LH, Roenunich JN. Reducing sedentary behavior: role in modifying physical activity. *Exerc Sport Sc-i Rev*. 2001;29:103-108.
85. Curry SJ, Wagner EH, Grothaus LC. Evaluation of intrinsic and extrinsic motivation interventions with a self-help smoking cessation program. *J Consult Clin Psychol* 1991;59:318-324.
86. King AC, Friedman R, Marcus B, et al. Harnessing motivational forces in the promotion of physical activity: the Community Health Advice by Telephone (CHM) project. *Health Educ Res*. 2002;17: 627-636.
87. Stewart AL, Verboncoeur CJ, McLellan BY, et al. Physical activity outcomes of CHAMPS II: a physical activity promotion program for older adults. *J Gerontol A Blot Sci Med Sci* 2001;56:M465-M470.

88. Williams GC, Minicucci DS, Kouides RW, et al. Self-determination, smoking, diet and health. *Health Educ Res.* 2002;17:512-521.
89. Williams GG, Gagne M, Ryan RM, Deci EL. Facilitating autonomous motivation for smoking cessation. *Health Psychol.* 2002;21:40-50.
90. McAuley E, Blissmer B. Self-efficacy determinants and consequences of physical activity. *Exerc Sport Sci Rev.* 2000;28:85-88.
91. Lang FR, Heckhausen J. Perceived control over development and subjective well-being: differential benefits across adulthood. *J Pers Soc Psychol* 2001;81:509-523.
92. Duncan-Myers AM, Huebner RA. Relationship between choice and quality of life among residents in long-term-care facilities. *Am J Occup Ther* 2000;54:504-508.
93. Okun MA, Olding RW, Cohn CM. A meta-analysis of subjective well-being interventions among elders. *Psychol Bull* 1990;108:257-266.
94. Pinquart M. [Effects of psychosocial and psychotherapy interventions on well-being and self concept in advanced age-results of meta-analyses]. *Z Gerontol Geriatr* 1998;31:120-126.
95. O'Connor BP, Vallerand RJ. Motivation, self-determination, and person-environment fit as predictors of psychological adjustment among nursing home residents. *Psychol Aging.* 1994;9:189-194.
96. Kasser VG, Ryan RM. The relation of psychological needs for autonomy and relatedness to vitality, well-being, and mortality in a nursing home. *J Appl Soc PsychoL* 1999;29:935-954.
97. Cartensen LL. A life-span approach to social motivation. In: Heckhausen J, Dweck C, eds. *Motivation and Self-Regulation Across the Life Span*. New York: Cambridge University Press; 1998:341-364.
98. Marcus BH, Simkin LR. The transtheoretical model: applications to exercise behavior. *Med Sct Sports Exerc.* 1994;26:1400-1404.
99. Rollnick S, Miller WR. What is motivational inter-viewing? *Behav Cogn Psychother* 1995;23:325- 334.
100. Sheldon KM, Williams GC, Joiner T *Self-Determination Theory in the Clinic: Motivating Physical and Mental Health*. New Haven: Yale University Press; 2003.
101. Rollnick S, Mason P, Butler C. *Health Behavior Change: A Guide for Practitioners*. Edinburgh: Churchill Livingstone; 2000.